

What is claimed is:

1. A system for regulating the supply of power to a vehicle's brake system, comprising:
 - an engine;
 - an intermediary device driven by said engine;
 - a brake power source driven by said intermediary device;
 - a brake system powered by said brake power source; and
 - a controller in communication with said intermediary device, said controller, in response to a minimum engine speed, causing said intermediary device to drive said brake power source at a desired rate.
2. The system as claimed in claim 1, wherein said controller is an electronic control unit.
3. The system as claimed in claim 1, wherein said brake power source is a source of pressurized fluid.
4. The system as claimed in claim 3, wherein said source of pressurized fluid is an air compressor.
5. The system as claimed in claim 4, wherein said air compressor is a swash plate compressor.
6. The system as claimed in claim 5, wherein said compressor comprises:
 - a cylinder block having at least one piston channel therein;
 - a swash plate housing mounted adjacent to said cylinder block;
 - a shaft disposed in said swash plate housing and cylinder block;
 - a swash plate mounted on said shaft;

at least one piston coupled to said swash plate and disposed in said at least one piston channel and slidable therein; and

an actuator contacting said swash plate, such that said actuator, in a first position, exerts a force on said swash plate appropriate to retain said swash plate in a position perpendicular to said drive shaft, such that said at least one piston remains idle, and, in a second position, exerts a force on said swash plate appropriate to pivot said swash plate, thereby causing reciprocal motion of said at least one piston when said actuator rotates.

7. The system as claimed in claim 3, wherein said brake system comprises:

a reservoir for receiving the pressurized fluid from said source of pressurized fluid;

a braking mechanism;

a valve connecting said reservoir to said braking mechanism; and

a valve actuator connected to said valve for governing the flow of the pressurized fluid from said reservoir to said braking mechanism.

8. The system as claimed in claim 7, wherein the vehicle includes a rotating surface and said braking mechanism comprises:

a contact device for contacting the rotating surface and thereby creating friction; and

a contact device actuator for causing said contact device to contact the rotating surface.

9. The system as claimed in claim 8, wherein said contact device comprises a fixed caliper.

10. The system as claimed in claim 8, wherein said contact device comprises a floating caliper.

11. The system as claimed in claim 8, wherein said contact device comprises a brake shoe.
12. The system as claimed in claim 8, wherein said contact device actuator comprises a piston.
13. The system as claimed in claim 8, wherein said contact device actuator comprises a spring.
14. The system as claimed in claim 1, wherein said brake power source is a source of electricity.
15. The system as claimed in claim 14, wherein said brake power source is an electric generator.
16. The system as claimed in claim 14, wherein said brake system comprises:
 - a braking mechanism;
 - a switch connecting said source of electricity to said braking mechanism; and
 - a switch actuator connected to said switch for governing the flow of the electricity from said source of electricity to said braking mechanism.
17. The system as claimed in claim 16, wherein the vehicle includes a rotating surface and said braking mechanism comprises a contact device for contacting the rotating surface and thereby creating friction.
18. The system as claim in claim 17, wherein said contact device comprises a fixed caliper.
19. The system as claimed in claim 17, wherein said contact device comprises a floating caliper.
20. The system as claimed in claim 17, wherein said contact device comprises a brake shoe.

21. The system as claimed in claim 1, wherein said intermediate device comprises at least two separately housed interconnected components.

22. The system as claimed in claim 21, wherein said intermediate device comprises:

a supply device driven by said engine for supplying an agency; and
a motor driven by the agency supplied by said supply device.

23. The system as claimed in claim 22, wherein:

said supply device comprises a generator for supplying electricity; and
said motor comprises an electric motor driven by the electricity.

24. The system as claimed in 22, wherein:

said supply device comprises a hydraulic pump for supplying fluid; and
said motor comprises a hydraulic motor driven by the fluid.

25. The system as claimed in claim 24, further comprising a reservoir for receiving fluid from said motor and from which said pump receives the fluid.

26. The system as claimed in claim 21, wherein said intermediate device comprises:

at least two gear trains; and

a clutch for switching from one of said gear trains to another of said gear trains.

27. The system as claimed in claim 1, wherein said controller has at least one input for receiving information, in response to which said controller determines the rate at which to cause the intermediate device to drive the brake power source.

28. The system as claimed in claim 27, wherein the at least one input comprises an input for receiving information reflecting the revolutions per minute of said engine's crankshaft.

29. The system as claimed in claim 27, wherein the at least one input comprises an input for receiving information reflecting throttle position.
30. The system as claimed in claim 27, wherein the at least one input comprises an input for receiving information reflecting the rate of rotation of at least one of the wheels.
31. The system as claimed in claim 27, wherein the at least one input comprises an input for receiving information reflecting air pressure.
32. The system as claimed in claim 27, wherein the at least one input comprises an input for receiving information reflecting voltage.
33. The system as claimed in claim 27, wherein the at least one input comprises an input for receiving information reflecting temperature in an air dryer.
33. The system as claimed in claim 27, wherein:
said intermediate device comprises
a supply device driven by said engine for supplying an agency;
and
a motor driven by the agency supplied by said motor; and
the at least one input comprises an input for receiving information reflecting the speed of said motor.
35. A system for regulating the supply of power to a vehicle's brake system, comprising:
an engine;
an intermediary device driven by said engine;
a source of pressurized fluid driven by said intermediary device;
a brake system powered by said source of pressurized fluid; and

an electronic control unit in communication with said intermediary device, said controller, in response to a minimum engine speed, causing said intermediary device to drive said source of pressurized fluid at a desired rate.

36. The system as claimed in claim 35, wherein said intermediate device comprises:

a generator driven by said engine for supplying electricity; and
an electric motor driven by the electricity supplied said generator.

37. The system as claimed in 35, wherein said intermediate device comprises:

a hydraulic pump driven by said engine for supplying fluid; and
a hydraulic motor driven by the fluid.

38. The system as claimed in claim 35, wherein said intermediate device comprises:

at least two gear trains driven by said engine; and
a clutch for switching from one of said gear trains to another of said gear trains.

39. A system for regulating the supply of power to a vehicle's brake system, comprising:

an engine;
an intermediary device driven by said engine;
a source of electricity driven by said intermediary device;
a brake system powered by said source of electricity; and
an electronic control unit in communication with said intermediary device, said controller, in response to a minimum engine speed, causing said intermediary device to drive said source of electricity at a desired rate.

40. The system as claimed in 39, wherein said intermediate device comprises:

a hydraulic pump driven by said engine for supplying fluid; and
a hydraulic motor driven by the fluid.

41. The system as claimed in claim 39, wherein said intermediate device comprises:

at least two gear trains driven by said engine; and
a clutch for switching from one of said gear trains to another of said gear trains.